

(translation)

Pioneer

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Attachment 11 pages

Re : Additional Literature for New National Filing
Your Ref. PPN00058
Our Ref. 54P0612
"Portable Information Terminal ..."

RECEIVED
MAY 19, 2000
FUJIPAT

Regarding the above-identified matter we promised to provide additional literature about reduction of electric power consumption in LCD display part at the meeting of April 19 for technical explanation. We are enclosing herewith patent laid-open document for your reference which discloses a technology similar to the present application in reducing electric power consumption by selectively displaying data on a color display and a monochrome display.

Attachment: Japanese Patent Laid-Open Publication No. 2000-89208

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(19)



JAPANESE PATENT OFFICE

PATENT ABSTRACTS OF JAPAN

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(71) Applicant

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(54) REFLECTION TYPE LIQUID CRYSTAL DISPLAY DEVICE

(57) Abstract

PROBLEM TO BE SOLVED: To provide a device which is high in resolution, display luminance and image quality by providing the device with a specific image display means and a color display means which is formed on the image display means and is capable of successively selectively switching three primary colors of colors in synchronization with black and white images.

SOLUTION: This liquid crystal display device is provided with the image display means which impresses display voltage from pixel electrodes to liquid crystals and successively displays the black and white images corresponding to the three primary colors of colors from the image display surface by modulating the reflected light intensity of the light entering from outside at every pixel electrodes and the color display means which is capable of formed on the image display means and is capable of successively selectively switching the three primary colors of colors in synchronization with the black and white images. With this device, incident light 114 is any of the three primary colors R, G and B by transmitting a liquid crystal color shutter 102 twice. The light is reflected by Al reflection electrodes 105 of respective pixels

according to the monochromatic display images meeting the display colors of the liquid crystal color shutter in a monochromatic reflection type liquid crystal display section 101 and is then transmitted through or absorbed by a polarizing plate 108, by which the light is subjected to modulation of brightness and darkness and as the result, the images of the selected display colors are displayed.

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